

### Claims

1. A method of producing one or more gases in which a liquid (9) is electrolytically treated,  
  
characterized in that  
  
a substance (10) is present in the liquid (9) to which the or one of the gases to be produced adheres.
2. A method in accordance with claim 1, wherein the gas to be produced is hydrogen.
3. A method in accordance with either of claims 1 or 2, wherein the gases to be produced are hydrogen and oxygen.
4. A method in accordance with any one of the preceding claims, wherein the liquid (9) containing the or a gas to be produced is water.
5. A method in accordance with any one of the preceding claims, wherein the substance (10) to which the or a gas to be produced adheres is an ion exchanger.
6. A method in accordance with claim 5, wherein the ion exchanger (10) is an acid ion exchanger.

7. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) is of gel-like form.
8. A method in accordance with any one of the claims 5 to 7, wherein the ion exchanger (10) comprises a matrix, active groups and ions to be exchanged.
9. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) contains catalytically acting substances.
10. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) contains catalytically acting and/or gas delivering enzymes.
11. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) is kept in motion.
12. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) is kept in suspension in the liquid (9).
13. A method in accordance with any one of the preceding claims, wherein the substance to which the or a gas to be produced adheres or the ion exchanger (10) is supplied continuously.
14. A method in accordance with any one of the preceding claims, wherein the method is carried out in multiple stages.
15. An apparatus for the carrying out of the method in accordance with any one of the claims 1 to 14,

characterized by

a container (1) comprising a liquid (9) in which a substance (10) is present to which the or one of the gases to be produced adheres;

and a positive electrode (6) and a negative electrode (7) which can be or are connected to a power source (13).

16. An apparatus in accordance with claim 15, wherein an electrode (7) is tubular in design.
17. An apparatus in accordance with either of claims 15 or 16, wherein a filler material is present, in particular inside the tubular electrode (7), in the liquid (9) containing the or a gas to be produced and a substance (10) to which the or a gas to be produced adheres.
18. An apparatus in accordance with claim 17, wherein an acid is present in the filler material.